

Name: Dr. Rachna Bhateria

Designation: Assistant Professor in Department of Environmental Sciences

Post held: Counsellor, Youth Red Cross, M.D.U., Rohtak (from session 2015-16 to 2017-18)

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Contact number: 9254645473

Education qualification:

Education	Year of Passing	Marks (%)	Division	University/Institute
Ph.D	2012			M.D. University, Rohtak
M.Sc (Environmental Sciences)	2006	71	first	Guru Jambheshwar University of Science and Technology, Hisar
M.Tech (Environmental Engineering)	2008	78	first	Guru Jambheshwar University of Science and Technology, Hisar
B.Sc (Medical)	2004	67	first	M.D.University, Rohtak
Others P.G.Diploma in Environmental Law	2009	60	first	National Law School of Indian University, Bangalore

Projects Undertaken:

Title of the Project	Duration	Funding Agency
Bioremediation of Chromium(VI) from Electroplating effluent using bacterial strains	2 Yrs	UGC, New Delhi (Feb, 2011 – Feb, 2013)

I. Publications:

a. Published in Refereed/Peer reviewed Journals

- Bhateria, R., & Dhaka, R.** (2018). Biosorption of Lead (Pb²⁺) and Cadmium (Cd²⁺) using *Aspergillusniger*: Isotherms, Kinetics and thermodynamics. *Annals of Biology*. 34(2)
- Bhateria, R., & Dhaka, R.** (2017). Biological strategies for detoxification of Hexavalent Chromium. *International Journal of Pharma and Bio Sciences*. 8(1):35-48.
- Bhateria, R., & Dhaka, R.** (2017). Impact of electroplating effluent on growth of *triticumaestivum* and *hordeumvulgare*. *Environmental technology & Innovation*. 8, 389-398.
- Bhateria, R., & Snehlata.** (2016). Effect of Chromium and Zinc Accumulation on Antioxidant enzymes during Phytoremediation in *Amaranthusviridis* and *Partheniumhysterophorus*. *Indian Journal of Science and Technology*. 9(S1):1-7.
- RachnaBhateria** and Snehlata(2016): *Phytoremediation of heavy metals- enhanced by EDTA: A Review*. *International Journal of Earth Sciences and Engineering*. 09(04):885-896. [ISSN: 0974-5904, SJR index-0.141, SNIP-0.197].

6. **Rachna Bhatelia** and Disha Jain (2015): Water Quality Assessment of Lake Water: a Review. *Sustainable Water Resources Management*. 2(2):161-173 (Springer) [ISSN: 2363-5037 (print version)ISSN: 2363-5045 (electronic version)]
7. **RachnaBhatelia** and Snehlata(2015): *Partheniumhysterophorous*L : Harmful and Beneficial aspects – A Review. *Nature Environment and Pollution Technology*. 14(3):463-474. [ISSN: 0972-6268 (Print), ISSN:2395-3454 (online), SJR index-0.138, I.C. value- 5.96].
8. **RachnaBhatelia**, Snehlata and Renu (2015): Impact of Industrial Effluent on crops and soil properties: A Review. *Indian Journal of Environmental Protection*. 35(7):591-609.
9. **RachnaBhatelia** and Amir Abdullah (2015): Analyzing uncertainties in lake water: A review. *International Journal of Environmental Sciences*. 5(6): 155-168. (I.C. value- 6.29) (ISSN No. 0976 – 4402).
10. **RachnaBhatelia** and Renu Dhaka (2015): Algae as Biofuel. *Journal of Biofuel*. 5(6):607-631.Taylor and Francis ISSN:1759-7269E-ISSN:1759-7277
11. **RachnaBhatelia** and Rajesh Dhankhar (2014): Response surface methodology for biotransformation of Cr(VI) using *Salmonella sp. S4*. *International Journal of Pharma and Bio Sciences*. 5(4): (B) 307-319. (Impact factor – 2.958, I.C. value – 4.63) (ISSN – 0975-6299)
12. **RachnaBhatelia** and Snehlata (2013): Role of Rhizospheric bacteria in phytoremediation of heavy metal contaminated soil. *International Journal of Current Research*. 5(12): 3897-3907. (Impact factor -1.125, I.C. value- 6.29)
13. **RachnaBhatelia** and Rajesh Dhankhar (2013): Optimization of Cr(VI) biotransformation by response surface methodology using *Microbacteriummaritypicum*. *International Journal of Pharma and Bio Sciences*. 4(4): (B) 834-844. (Impact factor – 2.958, I.C. value – 4.63) (ISSN – 0975-6299)
14. AnjuHooda, Rajesh Dhankhar and **RachnaBhatelia** (2013): Sequestration of Uranium (VI) from aqueous solutions using Brewery yeast (*Saccharomyces cerevisiae*). *International Journal of Current Research*. 5(3): 704-710. (Impact factor -1.125, I.C. value- 6.29)
15. **RachnaBhatelia** and Rajesh Dhankhar (2013): Statistical modelling and optimization of Cr(VI) Biotransformation by indigenous bacterial strains using response surface methodology. *International Journal of Current Research*. 5(2): 303-312. (Impact factor -1.125, I.C. value- 6.29)
16. Rajesh Dhankhar and **RachnaBhateliaGuriyan** (2011): Bacterial Biosorbents for detoxification of heavy metals from aqueous solution. *International Journal of Advances in Science and Technology*. 2(6): 103-128. (ISSN No. 2229-5216)
17. Rajesh Dhankhar and **RachnaBhateliaGuriyan** (2011): Bioremediation strategies for management of metal contaminated soil. *International Journal of Environmental Sciences*. 1(7): 1884-1898. (I.C. value- 6.29) (ISSN No. 0976 – 4402)

b. Published in Conferences/Seminar Proceedings

1. RachnaBhatelia and Snehlata (2018): Tolerance Potential of *Amaranthusviridis* L. in chromium contaminated soil in “Environmental and Ecological Sustainability” Paper No. – 27, pp. 220-225 by Indra Gandhi National Open University, New Delhi India ISBN- 978-93-87960-94-7

2. Poonam Narwal and Rachna Bhatia (2015) Untrapping the hidden potential of Wetlands: A Review in Proceeding of National Seminar on Innovative Researches in Life Sciences held on February 21, 2015 organized by Department of Zoology, M.D.U. Rohtak, pp 83-94. (ISBN: 978-81-920945-5-7)
3. Rachna Bhatia and Rajesh Dhankhar (2012) Bacteria: A novel organism for chromium biosorption in National Seminar on Challenges in combating diseases: Cause to Cure held on 23 March, 2012 organized by Department of Zoology, M.D. University, Rohtak, pp 16-19.
4. Rachna Bhatia, Meenakshi Karwal and M. Bishnoi (2010) Characterization of Heavy Metals in Preserved and Fresh vegetables using Atomic Absorption Spectroscopy in National Conference on Environmental and Health Issues: In a changing climatic scenario held from 14-15 October, 2010 in Department of Environmental Sciences, M.D. University, Rohtak, pp 119-124.
5. Rachna, R. Dhankhar, Poonam, Anju and Radha (2010) Heavy Metals exposure from Vegetables- A Review in National Conference on Environmental Challenges: Sustainable Development held from 29-30 March, 2010 in Department of Environmental Sciences, M.D. University, Rohtak, pp 377-382.
6. Rachna and R. Dhankhar (2010) Bioenergy- A sustainable approach in National Seminar on Computing Life: Raw to Refined held on 27 March, 2010 organized by Department of Zoology, M.D. University, Rohtak, pp 16-19.
7. R. Dhankhar, Anju Hooda, Poonam, Radha, Rachna, Hemlata (2010) *Saccharomyces cerevisiae*: an ecofriendly alternative for heavy metal removal in National Seminar on Computing Life: Raw to Refined held on 27 March, 2010 organized by Department of Zoology, M.D. University, Rohtak, pp 134-139.
8. Rachna, M. Bishnoi, R. Solanki, Anju and Punam (2010) Comparison of Heavy Metals in packed and fresh vegetables in National Conference on Environmental Degradation: Effects, Challenges and Remedies held from 25-27 February, 2010 in Jan Nayak Ch. Lal Memorial College of Engineering, Sirsa, pp 110-112.
9. Anju Hooda, Poonam, Radha, Rachna, S. Chhikara, Hemlata and R. Dhankhar (2010) Development of Efficient Biosorbent by using non-immobilized *A. niger* Biomass for sequestration of Cr(VI) ions in National Conference on Environmental Degradation: Effects, Challenges and Remedies held from 25-27 February, 2010 in Jan Nayak Ch. Lal Memorial College of Engineering, Sirsa, pp 5-7.
10. Rachna and Rajesh Dhankhar (2010) Biotransformation: A Biological tool for detoxification of chromium, presented at State Level one day conference on Applications and special effects of advanced tools and Techniques in Current Zoology, held on 23rd Jan, 2010, pp. 27-33.

IV Book/Book Chapter Published

Book Chapter

1. Chapter Title: Microalgae: A Novel biosorbent for detoxification of Heavy metals in "Microalgae: Windows of Opportunity" Paper ID; PA/PM/2015/11. By SBW Publishers, New Delhi, India ISBN-10: 8185708649 ISBN-13: 978-8185708645

V. Development of e-content

Contributed in development of modules in UGCe-PG-Pathshala and SWAYAM.

VI.Membership/Fellowship of Professional/ Academic bodies, Societies etc.

- Life member of the Society for Science of Climate Change and sustainable environment (SSCE).
- Life member of Association of Microbiologists (AMI) of India.
- Member, PG Board of studies in Environmental Sciences, MaharshiDayanand University, Rohtak (24-8-15 to 23-8-17)
- Member, Faculty of Life Sciences, MaharshiDayanand University, Rohtak. (1-1-19 to 1-1-20)

VII.Participation in Conferences/Seminars

1. Participated in National Workshop on “Intellectual Property Rights: Protection, Ownership and Innovation” held on 15 December, 2018 organized by Department of Education, M.D.U., Rohtak
2. Participated and presented paper entitled "Biosorption of Lead (Pb²⁺) ions by *Aspergillusniger*: Isotherms, Kinetics and Thermodynamics" in International Conference on Microbes for Biotechnological Innovations (MBI-2018) held on 7th December, 2018 organized by Department of Microbiology, M.D. University, Rohtak in Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
3. Participated in National Workshop on “Bioethics in Research: A need or compulsion” held on 15 November, 2018 organized by Department of Genetics, M.D. University, Rohtak.
4. Participated in National Workshop on “Intellectual Property Rights Protection” held on 3 November, 2018 organized by Department of Genetics, M.D. University, Rohtak.
5. Participated and presented paper entitled “Tolerance potential of *Amaranthusviridis* L. in chromium contaminated soil” in International Conference on Environmental and Ecological Sustainability: Engaging the Stakeholders held on 4th -5th October, 2018 organised by School of Interdisciplinary and Trans-disciplinary Studies Indra Gandhi National Open University, New Delhi
6. Participated and presented paper entitled “Cellular toxicology due to silver nanoparticles” in National Conference on Recent Advancements in Bioinformatics cum Workshop on Protein Bioinformatics held on 16th – 17th March, 2018 organised by Bioinformatics Infrastructural Facility, Centre for Bioinformatics, MaharshiDayanand University, Rohtak.
7. Participated and Presented paper entitled “Effect of Lead on the growth of *Partheniumhysterophorous* L.” in International Conference on Sustainable Agriculture, Energy, Environment and Technology (ICSAEET-2018) held on 24-25 february, 2018 organized by Environmental Sustainability Management Cell, MaharshiDayanand University, Rohtak.
8. Participated in National Conference-cum-Workshop on “Emerging Infectious Diseases” held on 29 November, 2017 organized by Centre for Biotechnology, M.D. University, Rohtak.
9. Participated and presented paper entitled “Application of Response Surface Methodolgy (RSM) for Optimization of Cadmium (Cd²⁺) biosorption by *Aspergillusniger* in Industrial Effluent” in International Conference on Microbes for Health and Wealth held on 14th November, 2017 organized by Department of Microbiology, M.D. University, Rohtak in Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
10. Participated and Chaired a Technical Session in a Two Days Interdisciplinary International Conference on “Role of Digitalization in Sustainable Development : A Global Perspective” held on 16- 17 September, 2017 organized by Department of Education, MaharshiDayanand University, Rohtak.

11. Participated and presented paper entitled “Role of Forensics in Wildlife Protection” in National Seminar on Current Scenario in Wildlife Protection held on 7 September, 2017 organized by Department of Genetics, M.D. University, Rohtak.
12. Participated and presented paper on “Nanomaterials for Environmental Remediation” in National Seminar on “Biodiversity: Status and Significance” held on 21 March, 2017 organized by Department of Botany, M.D.U., Rohtak.
13. Participated in workshop on “Coping Health Issues” on 23 February, 2017 organized by Women Study Centre, MaharshiDayanand University, Rohtak.
14. Participated and presented paper entitled “Remediation of chromium contaminated soil using *Amaranthusviridis*” in International Conference on “Emerging trends on Environmental Science and engineering” held from 16-18 February, 2017 organized by Environmental Sciences and Engineering” held in G.J.U.S & T, Hisar.
15. Participated in “One day Author workshop” conducted by Vivekanand Library on 18 November, 2016 in association with Elsevier, MaharshiDayanand University, Rohtak.
16. Participated in one week Faculty Development Programme on “Environmental Pollution: Monitoring and control” (EPMC-2016) held from 24-28 October, 2016 organized by Department of Environmental Engineering, Delhi Technological University, Delhi.
17. Participated and presented paper entitled “Phytoremediation potential and antioxidant response in *Partheniumhysterophorous*” in one day National Conference on Genetic Diversity and Therapeutic Potential of Natural Products held on 17 September, 2016 organized by Department of Genetics, M.D. University, Rohtak.
18. Participated in one day workshop on “Save Ozone Layer: Protect Life” on 16 September, 2016 organized by Department of Environmental Sciences, MaharshiDayanand University, Rohtak.
19. Participated and presented paper entitled Mechanism of Cr(VI) Biotransformation in Plants in National seminar on Today’s Vision: Save Ozone, Save Earth organised by Department of Environment Science, MD University, Rohtak held on 16th September, 2015.
20. Participated in one day workshop on “Skill Education and Choice Based Credit System (CBCS)” on 31 March, 2016 organized by MaharshiDayanand University, Rohtak sponsored by RUSA, Department of Higher Education, Government of Haryana.
21. Participated and presented paper entitled “Biotransformation of Cr (VI) by *Micobacteriummaritypicum* – isolation, optimisation and industrial applicability” in International Conference on “Sustainable Ecosystem and Environment” held from 18-21 November, 2015 organized by International Council for Health and Environment (ICHE) in collaboration with Action for Sustainable Efficacious development and Awareness (ASEA) in Dubai.
22. Participated and presented paper entitled “Green technology for detoxifying heavy metals from polluted soil” in National Conference on “Therapeutic Potential of Natural Products: Current Innovations and Future Trends” held on 19 March, 2015 organized by Department of Genetics, M.D. University, Rohtak.
23. Participated in “Author Workshop” on 25 February, 2015 organized by Springer and MaharshiDayanand University.

24. Participated and presented paper on “Mechanism of Cr(VI) Biotransformation in microbes and Plants” in National Seminar on “Innovative Researches in Life Sciences” held on 21 February, 2015 organized by Department of Zoology, M.D. University, Rohtak.
25. Participated in 3rd International Research Colloquium on “Interdisciplinary Scope of Microbiology: Present Status and Future Directions (IRCISM-2015)” held on 31 January, 2015 organized by Department of Microbiology, M.D. University, Rohtak in Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
26. Participated in National Seminar on “Convergence of Biotechnology and Engineering for Industry (CBEI-2014)” held on 26 November, 2014 organized by Department of Biotechnology, University Institute of Engg. and Technology, M.D. University, Rohtak.
27. Participated in University Level Workshop on “Disaster Management” held on 19 November, 2014 organized by Youth Red Cross, M.D. University, Rohtak.
28. Participated in one day National Seminar on Molecular Pathology of Human Genetic Diseases held on 23 August, 2014 organized by Department of Genetics, M.D. University, Rohtak.
29. Participated and presented paper entitled “Algae as a fuel” in National Conference on “Pollution Mitigation for a Sustainable Future” held on 26 March, 2014 organized by Department of Environmental Sciences, M.D. University., Rohtak.
30. Participated and presented paper entitled “Potential of molecular markers in crop improvement” in National Workshop on “Genomics in Crop Improvement” held from 27-28 February, 2014 organized by Centre for Biotechnology, M.D.U., Rohtak.
31. Participated and presented paper entitled “Reduction of hexavalent chromium bacterial strains isolated from soil contaminated with textile effluent” in International symposium on “Frontiers Discoveries and Innovations in Microbiology and its Interdisciplinary Relevance (FDMIR-2013)” held from 17-20 November, 2013 organized by Association of Microbiologists (AMI) of India-Rohtak Unit, M.D.U., Rohtak.
32. Participated as a resource person in Workshop on “Techniques in monitoring environmental pollution” held from 25th- 26th October, 2013 organized by Department of Environmental Sciences, M.D.U., Rohtak.
33. Participated in National Seminar on “Novel Antimicrobial: An Alternative to Clinical Antibiotics” held on 14 September, 2013 organized by Department of Genetics, M.D. University, Rohtak.
34. Participated and presented paper on “Biosorption of Hexavalent chromium using groundnut husk” in National Seminar on “Promising Trends in Science Galaxy” held on 20 March, 2013 organized by Department of Zoology, M.D. University, Rohtak.
35. Participated and presented paper on “Use of bacterial enzymes for improving the health of environment” in International Geographical Union (IGU) Conference held from 14-16 March, 2013 on Geoinformatics for biodiversity and climate change organized by Department of Geography, M.D. University, Rohtak.
36. Participated in one day International Research Colloquium on “Advances in Microbial Biotechnology: Future Prospects” held on 20 November, 2012 organized by Department of Microbiology, M.D. University, Rohtak in Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
37. Participated in National Workshop on Microbial Diversity: Exploration and Perspectives held from 3rd May to 12th May, 2012 organized by Department of Environmental Sciences, M.D.U., Rohtak.

38. Participated in 2nd National Seminar on “Microbes in Human Welfare” held on 24 March, 2012 organized by Department of Microbiology, M.D. University, Rohtak in Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
39. Participated and presented paper on “Bacteria: a novel organism for chromium biosorption” in National Seminar on Challenges in Combating Diseases: Cause to Cure held on 23 March, 2012 organized by Department of Zoology, M.D.U., Rohtak.
40. Participated in National Seminar on Recent Advancements in application of Genetics held on 20 March, 2012 organized by Department of Genetics, M.D. University, Rohtak.
41. Participated in National Workshop on Current Perspectives in Advance Material Science held from 8-9 February, 2012 in Pt. Neki Ram Sharma Government College, Rohtak.
42. Participated and presented paper on “Bioremediation of metal contaminated soil” in 6th National Conference on Thermodynamics of Chemical and Biological Systems NCTCBS-2011 held on 2-4 November, 2011 in Department of Chemistry, M.D.U., Rohtak.
43. Participated in 1st National Seminar on “Microbes and Resource Management” held on 22nd October, 2011 organized by Association of Microbiologists of India-Rohtak Unit, M.D.U., Rohtak.
44. Participated in Seminar on Intellectual Property- Creation and Protection held on 23rd April, 2011 organized by Department of Microbiology, M.D.U., Rohtak.
45. Participated and presented paper on “Ocean acidification” in National Seminar on Internet: Applications in Research held on 26 March, 2011 in Department of Zoology, M.D.U., Rohtak.
46. Participated and presented paper on “Biotransformation of Chromium (VI)” in National conference on Multidisciplinary Approach in Frontier areas of Environmental Sciences and Engineering” held in G.J.U.S & T, Hisar from 4-5 March, 2011.
47. Participated and presented paper on “Bacteria: A novel organism for chromium biosorption” in National Conference on “Biodiversity: Challenges and opportunities” held in Department of Botany, M.D.U., Rohtak on Feb 18-19, 2011.
48. Participated in India- Japan Seminar on “Nanomaterials for Diagnostic and therapeutic” held in Department of Biochemistry, M.D.U., Rohtak on Oct. 30, 2010.
49. Participated and presented paper on “Characterization of Heavy Metals in Preserved and Fresh vegetables uses Atomic Absorption Spectroscopy” in National Conference on Environmental and Health Issues: In a changing climatic scenario held from 14-15 October, 2010 in Department of Environmental Sciences, M.D. University, Rohtak.
50. Participated and presented paper on “Heavy Metals exposure from Vegetables- A Review” in National Conference on Environmental Challenges: Sustainable Development held from 29-30 March, 2010 in Department of Environmental Sciences, M.D. University, Rohtak.
51. Participated and presented paper on “Bioenergy- A sustainable approach” in National Seminar on Computing Life: Raw to Refined held on 27 March, 2010 organized by Department of Zoology, M.D. University, Rohtak.
52. Participated in one day National Workshop on “Environmental Problems and its mitigation” held on 26 March, 2010 organized by Department Environmental Sciences, M.D. University, Rohtak.

53. Participated and presented paper on “Comparison of Heavy Metals in packed and fresh vegetables” in National Conference on Environmental Degradation: Effects, Challenges and Remedies held from 25-27 February, 2010 in Jan Nayak Ch. Lal Memorial College of Engineering, Sirsa.
54. Participated and presented paper presented on “Biotransformation: A Biological tool for detoxification of chromium”, in State Level one day conference on Applications and special effects of advanced tools and Techniques in Current Zoology, held on 23rd Jan, 2010 in Hindu Girls College, Sonapat.
55. Presented Poster in the Zonal Seminar on “Abiotic Stress Tolerance in Plants-Physiological and Molecular Approaches” organized by Centre for Plant Biotechnology, Hisar on 5 December, 2009.
56. Participated in National Seminar on “Biodiversity : concerns and Solutions” held on 20 November, 2009 organized by Department of Botany, M.D. University, Rohtak.
57. Participated and presented Poster in UGC Sponsored National Seminar on “Environment and Sustainable Development” from 3-4 November, 2009 organized by Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar.

